CENTRE OF STUDIES FOR BUILDING SURVEYING
FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING
UNIVERSITI TEKNOLOGI MARA

INDOOR AIR QUALITY ASSESSMENT IN ENCLOSED CAR PARK

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"I hereby declare that this academic project is the result of my own research except for the quotation and summary which have been acknowledged"

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Abstract

Generally, this study concerned about the indoor air quality assessment in enclosed car park. It is related about the building management indoor air control in the commercial building in Plaza Perangsang, Plaza Alam Sentral and Complex PKNS. The aims of the study to assess the indoor air quality in enclosed car park and to determine the concentration of gas in the area. It has three objectives that need to be achieved. Firstly to understanding the important of indoor air quality in enclosed car park, secondly to analyze the effectiveness indoor air quality in enclosed car park, thirdly to measure the reading of indoor air quality enclosed car park and last one is to give recommendation to improve the indoor air quality in enclosed car park. The research methodology that has been implemented during the research is through the sampling of air quality. In this study the sample reading of gas CO and CO2 will be collect to assess the level of concentration and it will be collect in unit ppm. The gas reading will be made of 10 minute interval for 1 hour duration in the afternoon and evening. Through the sampling data will be analyses whether the air qualities comply with the requirement and standard of Malaysia guidelines. All the data has been presented or show into the forms of table and graph. Finding shows that the Plaza Alam Sentral has the poor indoor air quality in enclosed car park maybe either the lack maintenance of service, poor ventilation system or design. While the Plaza Perangsang and Complex PKNS in a good condition of air quality. The readings of gas concentration exceed the air quality guidelines. It is supported by the questionnaire session where respondent agree the Plaza Alam Sentral have a poor indoor air quality. Recommendations are made to improve the indoor air quality in enclosed car park to provide the effectiveness of ventilation system.

CHAPTER I

INTRODUCTION

1.1 INTRODUCTION AND BACKGROUND

Indoor air quality (IAQ) is a term which refers to the air quality within and around buildings and structures, especially as it relates to the health and comfort of building occupants. IAQ can be affected by gases (including carbon monoxide, radon, and volatile organic compounds, particulates, microbial contaminants (mold, bacteria) or any mass or energy stressor that can induce adverse health conditions.

There are examples of common indoor air contaminants and their main sources which are carbon dioxide (CO^2), tobacco smoke, perfume, body odors – from building occupants dust like fiberglass, asbestos, gases, including formaldehyde – from building materials toxic vapors, volatile organic compounds (VOCs) – from workplace cleansers, solvents, pesticides, disinfectants, and glues.

Gases, vapors, odors – off-gas emissions from furniture, carpets, and paints, dust mites – from carpets, fabric, foam chair cushions ,microbial contaminants, fungi, moulds, bacteria, – from damp areas, stagnant water and condensate pans and ozone – from photocopiers, electric motors, electrostatic air cleaners. The quality of air inside enclose spaces has become a matter of growing concern. This concern was initially triggered by report of occupants of various indoor environments who complain about variety symptoms. (Husselbee 1984)